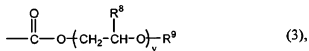


REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action and amended to place the application into condition for allowance. In particular, claim 10 has been amended and claims 11-13 have been canceled. Accordingly, claims 10 and 14-21 are pending in the application.

Claim 10 has been amended herein to include the subject matter of claims 11-13, which claims have been canceled. In addition, claim 10 has been amended to clarify that the mixture of polymerizable monomers for constructing the acrylic resin structure part includes (iii) a radical polymerizable monomer having one or more organic groups represented by the formula (3):

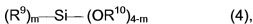


wherein R⁸ is hydrogen atom or an alkyl group having 1 to 4 carbon atoms, R⁹ is an alkyl group having 1 to 4 carbon atoms and y is an integer from 1 to 10, and that the content of the (iii) radical polymerizable monomer having one or more organic groups represented by the formula (3) is from 1 to 40 percent by weight of all monomers for constructing the acrylic resin structure part. This subject matter is disclosed in the specification on page 27, lines 21-26 and page 28, lines 14-15. Clearly, the amendments to claim 10 add no new matter to the application.

In the prior Office Action, the Examiner rejected claims 10-21 under 35 U.S.C. §102(b) as being anticipated by Yamamoto et al., U.S. Pat. No. 6,103,387. As noted above, claims 11-13 have been canceled by this amendment thereby rendering the prior rejection thereof moot. But applicants respectfully request reconsideration of

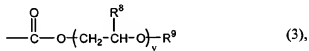
the rejection of claims 10 and 14-21 in view of the amendments made to claim 10 herein.

Yamamoto et al. discloses a thermosetting composition that comprises (A) a compound having in the molecule two or more carboxyl groups blocked by a vinyl ether compound, a vinyl thioether compound or a hetero compound having a vinyl type double bond and oxygen or sulfur as the hetero atom, (B) a compound having in the molecule two or more reactive functional groups which can form chemical bonds with the blocked carboxyl groups of compound (A), and (C) a dispersing component of at least one inorganic oxide sol selected from the group consisting of aluminium oxide sol, silica sol, zirconium oxide sol and antimony oxide sol, and optionally (D) a thermal latent acid catalyst which is activated during curing the composition by heating. As noted by the Examiner, Yamamoto et al. states that compounds utilized as ingredient (B) in the thermosetting composition of the invention are compounds having in the molecule two or more, preferably from 2 to 50, reactive functional groups which can form chemical bonds by the reaction with the regenerated carboxyl group formed from the blocked carboxyl group (1) of the compound (A) by heating (see col. 10, lines 61-67). With respect to ingredient (B), Yamamoto et al. further states that the reactive functional groups may include a single kind or two or more members (see col. 11, lines 9-10). Yamamoto et al. lists a very large number of compounds of ingredient (B) including compounds having epoxy group (see col. 11, lines 11-12), compounds having a silanol group or alkoxysilane group, such as condensation products of a compound having the formula (4):



where R9 and R10 are each selected from the group consisting of alkyl group of 1 to 18 carbon atoms and aryl group of 1 to 18 carbon atoms and m is 0, 1 or 2 (see col. 11, lines 48-55), and compounds having a hydroxyl group (see col. 11, lines 61-62).

However, Yamamoto et al. does not teach or suggest that a mixture of polymerizable monomers including (i) one or more hydroxyl group-containing radical polymerizable monomers, (ii) one or more epoxy group-containing radical polymerizable monomers and (iii) a radical polymerizable monomer having one or more organic groups represented by the formula (3):



wherein R⁸ is hydrogen atom or an alkyl group having 1 to 4 carbon atoms, R⁹ is an alkyl group having 1 to 4 carbon atoms and y is an integer from 1 to 10, should be polymerized in the presence of an organosilicate to construct a modified resin having an organosilicate structure part and an acrylic resin structure part as claimed in claim 10. At best, Yamamoto et al. discloses a very long list of monomers from which a mixture of monomers could be created. But Yamamoto et al. does not provide any teaching or guidance that would lead one of ordinary skill in the art to select (i) monomers having an epoxy group, (ii) monomers having a hydroxyl group and (iii) a radical polymerizable monomer having one or more organic groups represented by the formula (3) in the amounts claimed in claim 10, and to polymerize such monomers in the presence of an organosilicate to construct a modified resin having an organosilicate structure part and an acrylic resin structure as claimed. The modified resin (F) as claimed in claim 10 is thus clearly not anticipated or fairly taught or suggested by ingredient (B) of Yamamoto et al.

The specification, at page 28, lines 10-13 teaches that (iii) the radical polymerizable monomer having one or more organic groups represented by the formula (3) is useful for orienting ingredient (C) effectively on the surface of the paint film even when the amount of ingredient (C) is small. This is not taught in the prior art of record. Applicants' claimed composition produces a different product than can be achieved using prior art compositions and processes and is thus patentable over the prior art of record.

Claims 14-21 depend, directly or through an intervening claim, from claim 10. Therefore, because claim 10 is patentable over Yamamoto et al., claims 11-21 are also patentable over such prior art reference.

Also in the prior Office Action, the Examiner rejected claims 10-21 under 35 U.S.C. §102(b) as being anticipated by Nambu et al., EP 1 013 730/ U.S. Pat. No. 6,316,572. Nambu et al. discloses a curable composition comprising: (A) a resin (A-1) obtained by mixing an epoxy group-containing compound (x) component and a carboxyl group-containing compound (y) component and/or a resin (A-2) based on an epoxy group-containing and carboxyl group-containing vinyl copolymer (z) component; (B) a vinyl copolymer whose main chain substantially consists of a vinyl copolymer chain and which has, within the molecule thereof, at least one hydrolyzable silyl group bound to a carbon atom; and (C) a silicon compound and/or a partial hydrozylate condensate thereof. The Examiner notes that Nambu et al. is silent on polymerizing the mixture of compound (x) and compound (y) of component (A-1) in the presence of component (C), but contends that the resulting product would be the same as claimed in claim 10 and thus is unpatentable using the

reasoning applied in In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985).

Applicants respectfully disagree.

Applicants note that compound (x) and compound (y) of component (A-1) are not monomers. They are polymers that have been polymerized prior to being mixed with component (C). For example, at col. 7, lines 23-27, Nambu et al. discloses the number average molecular weight of the compound (x) polymer. At col. 9, lines 31-38, Nambu et al. discloses the number average molecular weight of the compound (y)-i polymer. And at col. 10, lines 27-31, Nambu et al. discloses the number average molecular weight of the compound (y)-ii oligomer. Nambu et al. teaches that component (A) and component (C) should be admixed together to form the curable composition (see, e.g., col. 18, lines 5-8 and col. 20, lines 34-36). Thus, the monomers used to form the polymers of component (A) are not polymerized in the presence of component (C) in the composition according to Nambu et al. The monomers have already been polymerized to form resins when they first contact component (C). Thus, Nambu et al. is similar to Yamamoto et al. in its teachings in that it suggests reacting a precursor acrylic resin with an organosilicate. Obviously, the resulting product produced in accordance with the teachings of Nambu et al. is not identical or substantially similar to the modified resin having an organosilicate structure part and an acrylic resin structure part as claimed in claim 10, which includes (iii) the radical polymerizable monomer having one or more organic groups represented by the formula (3), which is useful for orienting ingredient (C) effectively on the surface of the paint film even when the amount of ingredient (C) is small. Thus, application of the In re Thorpe analysis is inappropriate, because the resulting products are not sufficiently similar.

Claims 14-21 depend, directly or through an intervening claim, from claim 10. Therefore, because claim 10 is patentable over Nambu et al., claims 14-21 are also patentable over such prior art reference.

Finally, in the prior Office Action, the Examiner rejected claims 10-15 and 18-21 under 35 U.S.C. §102(b) as being anticipated by Nakamura et al., JP 11-116847 ("JP847"). JP847 discloses a topcoating composition obtained by incorporating (A) 100 parts by weight of an organic coating composition with (B) 0.1-15 parts by weight of a partially hydrolytic condensate of an organosilicate compound. Component (A) of JP847 can be an acrylic resin formed by copolymerizing a hydroxyl group-containing monomer (a) and other polymerizable vinyl monomers (b) such as epoxy group-containing monomers (see, e.g., paragraphs [0028]-[0030]). The copolymerization product (i.e., a resin) component (A) is then contacted with the organosilicate component (B). Thus, the monomers used to form the polymers of component (A) are not polymerized in the presence of component (B) in the composition according to JP847. The monomers have already been polymerized to form the resin before the resin contacts component (B). JP847 is thus similar to Yamamoto et al. and Nambu et al. in its teachings in that it suggests reacting a precursor acrylic resin with an organosilicate. Obviously, the resulting product produced in accordance with the teachings of JP847 is not identical or substantially similar to the modified resin having an organosilicate structure part and an acrylic resin structure part as claimed in claim 10. Thus, application of the In re Thorpe analysis is inappropriate, because the resulting products are not sufficiently similar.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is

determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge the same to Deposit Account No. 18-0160, our Order No. ORI-17098.001.

Respectfully submitted,

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